

REMARKS

Amendments to the claims

Claim 1-11 and 13 are cancelled. Claim 12 has been rewritten as an independent claim incorporating the substance of claim 1. New claims 21-28 incorporate the substance of canceled claims 2-9.

Amended claim 12 is amended to recite optional substituents. New claims 22, 23, 25 and 28 also recite the optional substituents. Support is found at the paragraph spanning pages 9 and 10.

Rejection Under 35 U.S.C. § 102(b)

Claims 1-9 and 16 stand rejected as anticipated by Abbas,¹ and by Dyachenko I² and II.³ Claims 1-9 and 16 are cancelled. The rejection is therefore moot.

Rejection Under 35 U.S.C. § 103

Claims 1-9 and 16 stand rejected as obvious over the combined teachings of Abbas, and by Dyachenko I and II. Claims 1-9 and 16-18 are canceled. The rejection is therefore moot.

Rejection Under 35 U.S.C. § 112 ¶ 1 (written description)

Claim 1 stands rejected as lacking adequate description with respect to solvates and hydrates. To advance prosecution, claim 1 is canceled and its substance is incorporated into

¹ Abbas *et al.*, J. Chemical Research, Synopses 4:124-125 (2001)).

² Dyachenko *et al.*, Chemistry of Heterocyclic Compounds, 34: 188-194 (1998).

³ Dyachenko *et al.*, Russian Journal of Organic Chemistry 33:1014-1017 (1997)).

amended claim 12, which recites a method of inhibiting HSP90 activity in mammals. Claim 12 does not recite hydrates and solvates. Withdrawal of this rejection is requested.

Rejection of Claim 1 Under 35 U.S.C. § 112 ¶ 1 (enablement)

Claim 1 stands rejected as lacking enablement of solvates and hydrates of the compounds. Claim 1 is canceled and its substance incorporated into claim 12. Claim 12, as amended, does not recite solvates or hydrates. Withdrawal of this rejection is requested.

Rejection of Claims 1, 3, 5, 6, 9, and 10 Under 35 U.S.C. § 112 ¶ 1 (enablement)

Claims 1, 3, 5, 6, 9, and 10 stand rejected as lacking enablement with respect to the scope of claimed compounds used to treat cancer. Office Action at page 8.

To advance prosecution, claims 1, 3, 5, 6, 9, and 10 are canceled. Amended claim 12 recites particular chemical groups that may be optional substituents. Amended claim 12 does not recite that R₄ may be a carboxylic ester. Withdrawal of this rejection is requested.

Rejection of Claims 12 and 13 Under 35 U.S.C. § 112 ¶ 1 (enablement)

Claims 12 and 13 stand rejected as lacking enablement with respect to treatment of all cancers. Office Action at pages 10-12.

To advance prosecution, claim 12 is amended to recite a method of inhibiting HSP90 activity in mammals. Claim 13 is canceled.

To make an enablement rejection, the examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*,

999 F.2d 1557, 1562 (Fed. Cir. 1993). The Patent Office has not supplied a rationale to support a finding that a skilled artisan would be unable to practice the full scope of amended claim 12 and new claims 21-28 without undue experimentation.

Moreover, the amount of experimentation required to practice the full scope of the invention would not be unreasonable. The standard for determining whether the present specification meets the enablement requirement is whether any experimentation which may be needed to practice the invention is undue. *In re Wands*, 858 F.2d 731, 736-37 (Fed. Cir. 1988). Even complex experimentation may not be considered undue if the art typically engages in such experimentation. *In re Certain Limited-Charge Cell Culture Microcarriers*, 221 U.S.P.Q. 1165, 1174 (Int'l Trade Comm'n 1983), *aff'd. sub nom., Massachusetts Institute of Technology v. A.B. Fortia*, 774, F.2d 1104 (Fed. Cir. 1985).

Claim 12 recites a method of inhibiting HSP90 activity in mammals. The specification identifies multiple candidate inhibitors. For example, pages 18-21 identifies lead compounds having HSP90 inhibitory activity. These compounds were identified by fluorescence polarization. See specification at page 21, ¶ 1. With the identified inhibitors in hand, the skilled artisan would need only routine experimentation to determine which HSP90 inhibitors worked in the mammal. The weight of the evidence establishes that claim 12 and new claims 21-28 are enabled. The Office Action has not established a *prima facie* case to the contrary.

Withdrawal of this rejection is requested.

Rejections Under 35 U.S.C. § 112 ¶2

Claims 1, 3, 5, 6, and 9-11 stand rejected as indefinite because:

- The expressions hydrate, solvate, optional substituents, optionally substituted and carboxylic ester in claims 1, 3, 5, 6, 9, and 10 are indefinite.
- Claim 9's recitation of " R_4 represents $\text{CONR}^B(\text{Alk})_nR^A$ " lacks antecedent basis because claim 1 does not permit the carboxamide to be substituted.
- " R^C " lacks antecedent basis in claims 10 and 11.
- " R^B " and " R^C " are not defined in claim 1.

Office Action at pages 12-13.

To advance prosecution, claims 1, 3, 5, 6, and 9-11 are canceled. Amended claim 12 does not recite hydrate, solvate, or carboxylic ester. Claim 12 and new claims 22, 23, 25, and 28 each recite the optional substituents that may be substituted.

Applicants respectfully traverse the rejection that $\text{CONR}^B(\text{Alk})_nR^A$ lacks antecedent basis. Formula $\text{CONR}^B(\text{Alk})_nR^A$ is not an optional substitute of a carboxamide as the Patent Office asserts. Rather, the formula is a particular species of carboxamide. New claim 28 incorporates the substance of now-cancelled claim 9 and recites the method of claim 12 wherein R_4 is a *carboxamide group* of formula $-\text{CONR}^B(\text{Alk})_nR^A$. Claim 12 recites that R_4 may be a carboxamide. Claim 12 thus provides antecedent basis for all carboxamide groups in the R_4 position.

Claims 10 and 11 are canceled; therefore, the rejections based on " R^B " and " R^C " are moot.

Amended claim 12 and new claims 21-28 are definite.

Withdrawal of this rejection is requested.

CONCLUSION

All rejections having been addressed, applicants respectfully submit that the instant application is in condition for allowance, and respectfully solicit prompt notification of the same.

Respectfully submitted,

BANNER & WITCOFF, LTD.

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By: /Susan A. Wolffe/
Susan A. Wolffe
Registration No. 33,568

1100 13th Street
Suite 1200
Washington, D.C. 20005
(202) 824-3000